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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/779,828 | 02/17/2004 | Sudhir R. Brahmhatt | 22-234 | 9145 |

2746 7590 04/12/2006

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EXAMINER

WARE, DEBORAH K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1651

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/779,828 | Applicant(s) BRAHMBHATT, SUDHIR R. | |
| | Examiner Deborah K. Ware | Art Unit 1651 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 25-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 3-6 and 25-26 are presented for reconsideration on the merits.

The final rejection of December 29, 2005, is withdrawn based upon the arguments provided by the after final request for reconsideration and updated search, and the prosecution has been reopened.

Response to Amendment

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The arguments filed have been deemed persuasive for the previous rejection and a new rejection is made as follows.

Claim Rejections - 35 USC § 103

Claims 1, 3-6, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over newly cited Cheng (US 2003/0080446 A1) (A) or Cheng (US PAT NO 5,985,652) (C) or Cheng (US PAT NO 5,798,254) (B) in view of the previous cited EP 0 341 878 A1.

Claims are drawn to a fermentation process wherein the improvement comprises injecting a stream of substantially pure oxygen into a vessel during fermentation wherein it is the sole reactive gas, from any source external to the vessel, and it is moved through the vessel solely due to pressure in an oxygen supply.

Cheng (A) teaches a fermentation process wherein the improvement comprises injecting a stream of pure oxygen and air into a vessel during fermentation and it is

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moved through the vessel solely due to pressure in an oxygen supply. Note page 2, column 2, paragraph [0028], all lines and the abstract.

Cheng (C) teaches a fermentation process wherein the improvement comprises injecting a stream of pure oxygen and air into a vessel during fermentation and it is moved through the vessel solely due to pressure in an oxygen supply. See the abstract and column 4, lines 9-40.

Cheng (B) teaches a fermentation process wherein the improvement comprises injecting a stream of pure oxygen and air into a vessel during fermentation and it is moved through the vessel solely due to pressure in an oxygen supply. Note abstract and columns 3, line 26 and 46-47 and column 4, lines 1-18.

EP, cited of record, teaches at page 3, lines 28-35 that the fermenter is injected with an inert gas and oxygen, note specifically page 3, line 29.

The claims differ from the cited Cheng references in that oxygen is not the sole reactive gas.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to replace the air in each of the Cheng references with the inert gas disclosed by EP to provide for injection of pure oxygen into the fermenter as the sole reactive gas because the inert gas of EP would have been expected to mix but not react with the secondary gas disclosed by each of the Cheng references. No reaction of pure oxygen with the inert gas would have been expected. The pure oxygen is shown in each of the cited Cheng references to move through the vessel solely due to pressure in the oxygen.

The injection of the oxygen would have been expected to be from any source external to the vessel in order to inject it into the vessel, there being some means expected to provide for the pure oxygen supply thereto. Each of the cited references teach mechanically agitating, measuring oxygen concentration and adjusting a flow of oxygen into the fermenter.

A continuous system is clearly contemplated by the cited prior art. Further, the fermenter systems are also contemplated to perform without agitation as well. Measuring continuously is clearly within the skill of an ordinary artisan. A blower nor a compressor are disclosed by the Cheng references. Also to perform the injecting step without mixing of the oxygen with liquid is clearly an obvious modification of the cited prior art. In the absence of persuasive evidence to the contrary the claims are rendered prima facie obvious over the cited prior art.

All claims fail to be patentably distinguishable over the state of the art discussed above and cited on the enclosed PTO-892 and/or PTO-1449. Therefore, the claims are properly rejected.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Deborah K. Ware
April 9, 2006



DAVID M. NAFF
PRIMARY EXAMINER
ART UNIT 128/651